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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,484	11/13/2003	Samir W. Habboosh	02570- P0014A	8323
24126	7590	04/25/2005	EXAMINER	
ST. ONGE STEWARD JOHNSTON & REENS, LLC			EASTHOM, KARL D	
986 BEDFORD STREET			ART UNIT	
STAMFORD, CT 06905-5619			PAPER NUMBER	

2832

DATE MAILED: 04/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,484

Applicant(s)

HABBOOSH, SAMIR W.

Examiner

Karl D. Easthom

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) 2, 17, 35, 39, 48 and 55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-16, 18-34, 36-38, 40-47, 49-54 and 56-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/13/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. Applicant's election without traverse of claims 1, 2-16, 18-34, 36-38, 40-47, 49-54, and 56-60 in the reply filed on 3/28/05 is acknowledged.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6-8, and 13-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 13-16, it is not clear what "electrical signal" the claim refers since the term lacks antecedent basis. In claims 6-9, it is not clear to what "said noble metal" refers since there is one in claim 1 and in claim 5. Similar remarks apply to "said oxide" in claim 8.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3-4, 10-16 and 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Herbst et al. (3,573,229) Herbst discloses the claimed invention at claim 7, with silver, and an oxide of zirconia noted, and a dielectric substrate. At Fig. 6, with a specific high TCR for higher resistors, the device can be used as a sensor. Or a resistor can be employed to sense voltage. The leads are 14 at Fig. 2. In claim 3, the resistor is deposited. In claim 4, the selected value is high. In claim 10, see Fig. 6. In claim 11, see the high frequency source at col. 9, lines 20-29. In claim 12, the source delivers current and voltage. In claim 13, the signal is taken to be the measured resistance that varies, where Figs. 6-7 imply measurements. In

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claims 14-16, the transducer is implicit in the measurements for TCR, at Fig. 6, since the TCR cannot be measured without correlating temperature to resistance with some sort of transducer. The resistor itself varies since it varies with temperature and that is a varying voltage of the electrical signal. In claims 18-19, the resistor is adapted to a measurement of heat flux in the resistor, since it has a TCR that indicates change of resistance with temperature, and all resistors are heaters, and this is the localized temperature of the resistor.

6. Claim 60 is rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi et al. (2002/0084884). The claimed invention is disclosed at Figs. 1 or 5 and par. 46 with module 23, transmit leads 21, insulating layer 22, and outer layer 23 made of the same material as the leads.

7. Claims 1, 3-4, 10, 18-20, 23, 27-34, 36-38, 40-42, and 45 are rejected under 35 U.S.C. 102(b) as being unpatentable over Wienand et al. (DE 4330437). Wienand discloses the claimed invention at Fig. 2 with dispersion hardened resistor 24 having a noble metal of platinum, as noted in the abstract, and oxides of zirconium, yttrium at col. 3, lines 20-45, with substrate 1, and leads 25, 26. The aforementioned meets claims 3-4, 10, 18, and 30-33. For claims 18-19, the device can measure heat flux or localized temperature. In claims 20 and 23, the sheath is 5, while the insulator is the casting compound. For claim 27, since the sensor has the same materials as claimed, it can operate as claimed. For claim 33, the oxide will be in the grain boundaries since it is dispersion strengthened. For claim 34, the device is as claimed as noted in the abstract. For claims 28-29 and 36-37, the third-fourth leads are 8 or 10. The process of claims 38, 40-42, 45 are met by the product, since a temperature detecting resistor

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generates an output voltage depending on temperature since its resistance changes which is a direct voltage correlation¹.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 3-4, 10, 18-20, 23, 27-34, 36-38, 40-42, and 45 rejected under 35 U.S.C.

103(a) as being unpatentable over Wienand et al. (DE 4330437) in view of Bourne et al.

(4002503) or Darling (3696502). Wienand discloses the claimed invention as noted above, but here it is assumed that perhaps the hardened resistor 24 having a noble metal of platinum, as noted in the abstract, may not disclose the oxides of zirconium, yttrium, etc. at col. 3, lines 20-45, in the embodiment noted. Bourne et al. discloses the way to improve platinum is to incorporate the claimed metal oxides, see Example IV, in order to form an improved temperature measuring resistor, see col. 1, lines 5-25, col. 10, lines 60-65, and col. 10, lines 30-37, so that such a metal oxide for dispersion strengthening would have been obvious. Darling discloses a similar teaching at Fig. 2, col. 2, lines 25-30, col. 2, lines 55-60, col. 1, lines 15-20, and col. 8, lines 30-35, where lanthanides are rare earth metals including the claimed metal oxides, rendering the modification obvious for the same reasons as Bourne et al., where Darling also teaches that the strengthened platinum is useful for making a high temperature resistance thermometer.

¹ The translation of this will be ordered. As an alternative where the rare earth metals oxides are not disclosed, see the rejection below.

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10. Claims 11-17, 22, 43-47, 49-54, 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wienand et al. (DE 4330437) in view of Schmermund (6341892). The claimed invention is disclosed as noted above except the sources, transducer, the material of the sheath. Schmermund discloses that the four wire system is typical for supplying current as power while measuring the resistance to determine where the output of the ohmmeter is calibrated to temperature, see also col. 1, rendering same obvious where Wienand discloses a similar resistance temperature sensor. For claims 22, the sheath material is not known, however, it is well known that coaxial cables have outer conductive sheaths that are metal or alloys, and it would have been obvious to make same an alloy or to employ the alloys listed at col. 4, lines 55-65 as the sheath for the purpose of protecting the device. Claims 56-58 follow from remarks above where the device can detect heat or local temperature and is the same material as disclosed so as to have the same properties.

11. Claim 21, 24-26, and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wienand et al. (DE 4330437) in view of Takahashi et al. (2002/0084844). The claimed invention is disclosed as noted above except the sheath material and the insulation material. Takahashi discloses a sheath 40 at par. 48, that is made of a metal case, and also discloses at par. 44 that dispersion strengthened platinum with zirconia is a good metal conductive material at high temperatures, so that it would have been obvious to employ that material for the case, where as noted above, Takahashi discloses a metal case that is the same materials as the wires. For claims 24-26, alumina is disclosed at par. 48 for the purpose of providing insulation to a temperature sensor from a sheath, while MgO is disclosed at par. 46 for a similar purpose, so that it would have been obvious to employ such materials for the device of Wienand which employs a

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similar insulating element to avoid destroying the device purpose. For claim 59, the transmit module is considered the cable 5 with leads 8, 10, 25 and 26, where the sensor and substrate are as noted above, with conductors 23, 24. Then the first transmit lead is 25 and would appear to be a different material than the transmit lead 10, since they are of different size, or it would have been obvious to make one of them the dispersion hardened lead material of Takahashi while keeping the other the same as the internal conductor of the coaxial cable, in order to form a lead that is resistant to temperature, as noted above.

12. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wienand et al. (DE 4330437) in view of Tomozawa et al. (6,081,182). Wienand discloses the claimed invention except the thin insulating coating as claimed. Tomozawa discloses a thin insulating film having the same or similar materials as the temperature sensor at cols. 5-6, lines 65-12, for the purpose of protecting the sensing film from diffusion so that it would have been obvious to form a layer formed of the same material as the sensing portion of Wienand in order to protect the sensor from contaminants or diffusion from an underlying electrode layer. It is well known that an oxide layer is insulating, while metals lend conductivity, so that a small portion of the metal would render such a layer a practical insulator as compared to having more metal as suggested at the top of col. 6 of Wienand where pure alumina is noted as an insulator.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D. Easthom whose telephone number is (571) 272-1989. The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karl D Easthom
Primary Examiner
Art Unit 2832

KDE